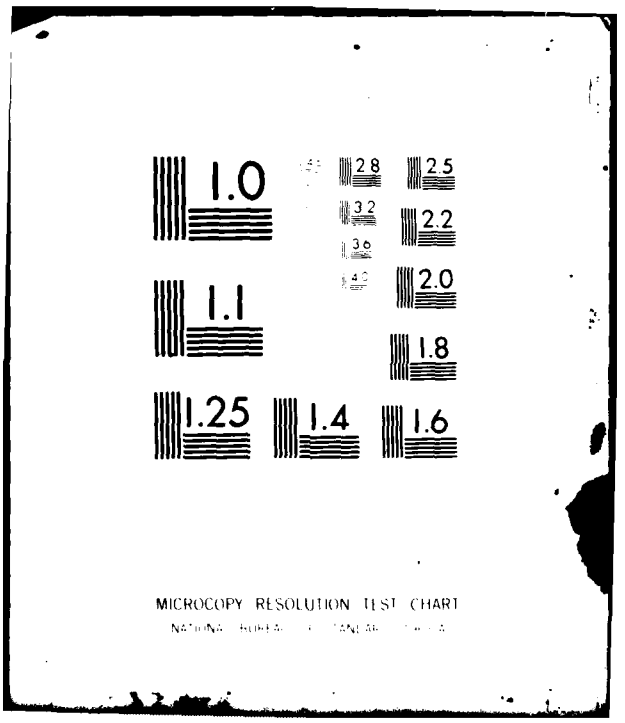
AD-A109 930 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 13/13
14818B LANCE, MISSILE NUMBER 4579, ROUND NUMBER 371-APT, 13 NOV--ETC(U)
NOV 81 D C KELLER
UNCLASSIFIED ERADCOM/ASL-DR-1212 NL

END
DATE FILMED
02-82
DTIC


1.0
2.8
2.5
3.2
2.2
3.6
4.0
2.0
1.1
1.8
1.25
1.4
1.6
MICROCOPY RESOLUTION TEST CHART

DR 1212
November 1981
AD

LEVEL II

12

METEOROLOGICAL DATA REPORT
14818B Lance
Missile Number 4579
Round Number 371-APT
13 November 1981

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

12 20

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

Destroy this report when it is no longer needed. Do not return to the originator.

DISCLAIMER

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

The citation of trade names and names of manufacturers in this report is not to be construed as official Government indorsement or approval of commercial products or services reference herein.

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER: DR 1212	2. GOVT ACCESSION NO.: AD-A109930
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle): 14818B Lance Missile Number 4579 Round Number 371-APT	5. TYPE OF REPORT & PERIOD COVERED
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s): White Sands Meteorological Team	8. CONTRACT OR GRANT NUMBER(s): DA Task 1F665702D127-02
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS: US Army Electronics Research & Development Cmd Atmospheric Sciecnes Laboratory White Sands Missile Range, New Mexico 88002	12. REPORT DATE: November 1981
	13. NUMBER OF PAGES: 20
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office): US Army Electronics Research &Development Cmd Adelphi, MD 20783	15. SECURITY CLASS. (of this report): UNCLASSIFIED
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

Approved for public release; distribution unlimited.

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of the 14818B LANCE, Missile Number 4579, Round Number 371-APT presented in tabular form.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

CONTENTS

INTRODUCTION

14818B Lance, Missile Number 4579, Round Number 371-APT, was launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 0511 MST, 13 Nov 1981. The scheduled launch time was 0500 MST.

DISCUSSION

Meteorlogical data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations.

a. Surface:

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m^3), wind speed and direction, and cloud cover were made at the LC-39 Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

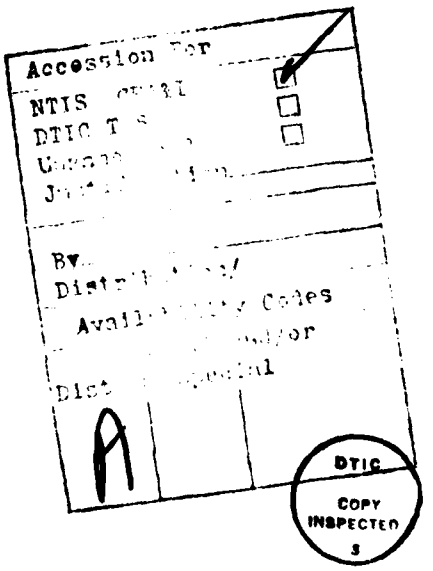
b. Upper Air:

(1) Low level wind data were obtained from single theodolite pilot-balloon observations at:

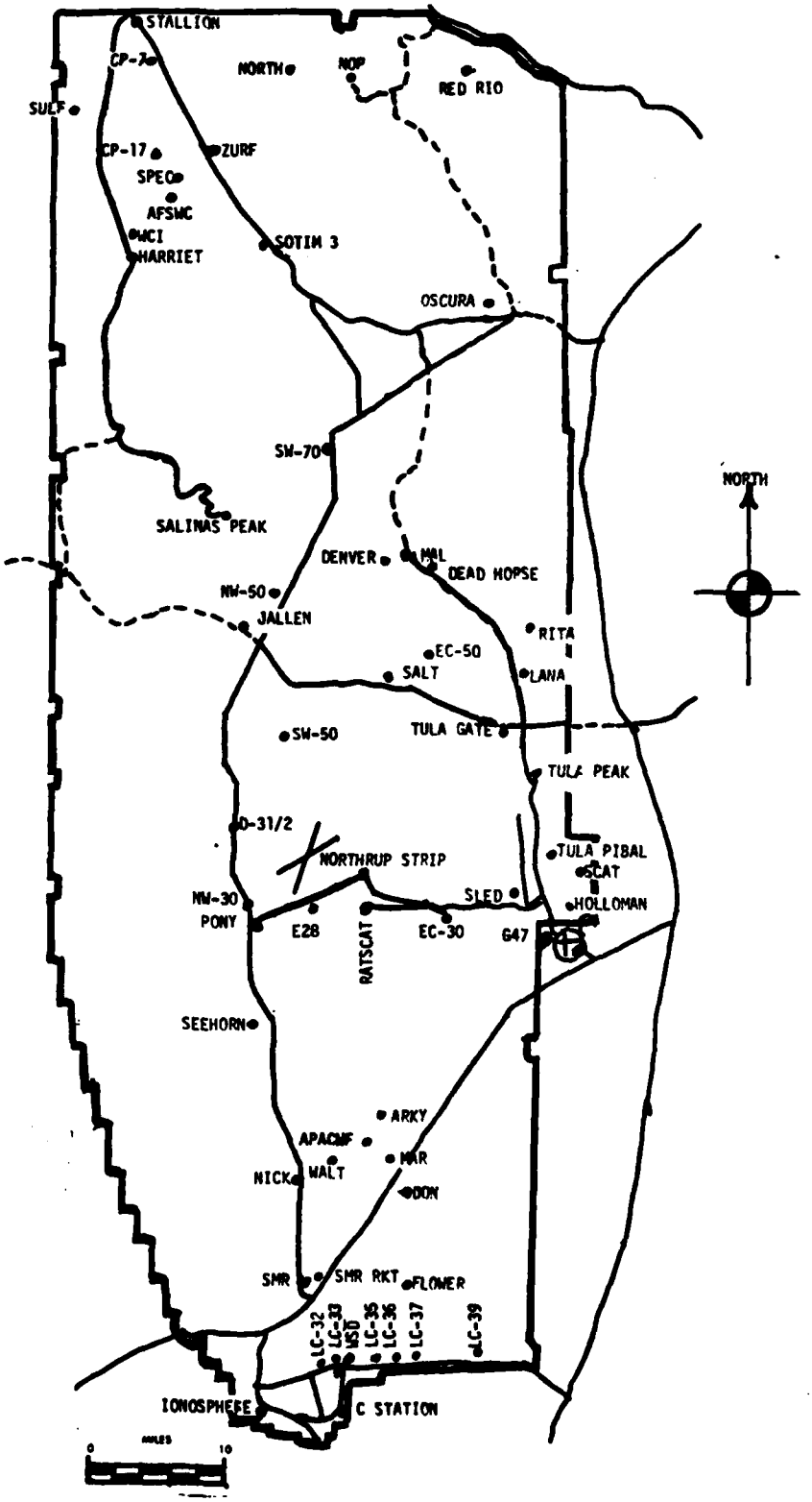
SITE AND ALTITUDE	
LC-39	1860 Meters
LC-39	3000 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to high as possible in 500-feet increments.

SITE AND TIME	
WSD	0512 MST
SMR	0500 MST



WSMR METEOROLOGICAL SITES



PROJECT SURFACE OBSERVATION

TABLE 1

STATION LC-39

DATE 13 (DAY) Nov (MONTH) 1981 (YEAR)

X= 530,938.82 Y= 186,564.96 H=4,063.80

TIME M S T	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
0512	879.6		-0.4		-6.4	64		C A	L M		10+

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
										C L E A R

PSYCHROMETRIC COMPUTATION

TIME: MST	0512		
DRY BULB TEMP.	-0.4		
WET BULB TEMP.	-2.5		
WET BULB DEPR.	2.1		
DEW POINT	-6.4		
RELATIVE HUMID.	64		

PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM LC-39 DATE 13 Nov 1981 TIME 0450 MST

COORDINATES (WSTM) X=530,938.82 Y= 186,564.96 H= 4,063.80

NOTE: WIND DIRECTIONS ARE REFERENCED TO _____.

HEIGHTS ARE METERS AGL X OR FEET AGL _____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
SFC	C A L	M
60	336	01
120	336	02
180	336	03
240	336	04
300	336	05
360	336	06
420	335	06
480	334	07
540	333	07
600	333	07
660	332	07
720	330	08
780	329	08
840	328	09
900	327	09
960	326	10
1020	325	10
1080	324	11
1140	323	12
1200	323	12
1260	322	13
1320	323	13
1380	323	14
1440	324	14
1500	324	15
1560	325	15
1620	325	16
1680	324	17
1740	324	17
1800	323	18
1860	323	18

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS

PILOT BALLOON MEASURED WIND DATA

TABLE 3

RELEASED FROM LC-39 DATE 13 Nov 1981 TIME 0512 MST

COORDINATES (WSTM) X= 530,938.82 Y= 186,564.96 H= 4,063.80

NOTE: WIND DIRECTIONS ARE REFERENCED TO _____.

HEIGHTS ARE METERS AGL X OR FEET AGL _____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
SFC	C A L	M
60	335	02
120	335	04
180	335	06
240	335	08
300	335	10
360	335	12
420	334	11
480	333	11
540	332	11
600	331	10
660	330	10
720	328	10
780	326	10
840	324	09
900	322	09
960	319	09
1020	318	09
1080	317	10
1140	316	10
1200	316	10
1260	315	10
1320	317	11
1380	320	12
1440	322	14
1500	324	15
1560	325	16
1620	325	17
1680	325	17
1740	324	18

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
1800	324	18
1860	323	19
1920	320	19
1980	314	20
2040	310	20
2100	306	21
2160	303	21
2220	301	22
2280	299	23
2340	299	23
2400	296	24
2460	295	25
2520	294	26
2580	293	27
2640	292	28
2700	291	29
2760	291	29
2820	291	30
2880	291	30
2940	291	30
3000	291	30

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS

TABLE 4

LAUNCH and IMPACT AREA COMPUTER MET MESSAGES
13 November 1981

WSD 0512 MST		SMR 0500 MST	
METCM1324064		METCM1325064	
131220122881		131200122883	
00000000	27420881	00000000	27340883
01610008	28140870	01610007	28240873
02566009	28800845	02625004	28890847
03581010	28730806	03506011	28810808
04531014	28350759	04504012	28430761
05528016	27960714	05477014	27990717
06549022	27650672	06519023	27680674
07560022	27510632	07524023	27610634
08575016	27210594	08532017	27280596
09586017	26840557	09545019	26900559
10559023	26420523	10524022	26520525
11583022	26090490	11527020	26120492
12578023	25620444	12531022	25550445
13579025	24820388	13532025	24750389
14575033	23890337	14536031	23870338
15579038	23060292	15539041	23030293
16582052	22270251	16543048	22210252

STATION ALTITUDE 3989.00 FEET MSL
13 NOV. 81 0512 HRS MST
ASCENSION NO. 696

SIGNIFICANT LEVEL DATA
3170020696
WHITE SANDS
TABLE 5

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
881.1	3989.0	1.0	-7.5	53.0
862.4	4568.4	13.1	1.1	44.0
850.0	4969.0	14.1	-.4	37.0
817.8	6039.7	14.5	-1.2	34.0
700.0	10280.1	4.6	-7.5	41.0
657.8	11936.9	1.9	-13.4	31.0
629.7	13094.2	1.9	-14.6	28.0
568.4	15781.6	-3.7	-18.7	30.0
508.7	18625.0	-10.9	-23.3	35.0
500.0	19060.7	-11.2	-24.6	32.0
460.1	21140.9	-16.1	-28.0	35.0
436.9	22420.6	-17.0	-30.7	29.0
400.0	24574.3	-22.9	-35.0	32.0
341.3	28320.7	-33.7	-43.0	38.0
318.7	29889.4	-37.7	-44.2	50.0
300.0	31252.8	-41.0		
287.5	32200.9	-43.3		
250.0	35246.3	-51.2		
228.8	37134.8	-53.3		
223.4	37642.1	-52.8		
218.0	38163.7	-51.7		
200.0	39998.8	-53.3		
156.0	45185.9	-60.5		
150.0	45992.2	-60.0		
120.9	50343.0	-68.6		
100.0	54071.5	-71.1		

STATION ALTITUDE 3989.00 FEET MSL
13 NOV. 81 0512 HRS MST
ASCENSION NO. 696

UPPER AIR DATA
317002069
WHITE SANDS
TABLE 6

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	881.1	1.0	-7.5	53.0	1118.0	645.5	.0	.0	1.000267
4000.0	880.7	1.2	-7.3	52.8	1116.5	645.8	332.4	.0	1.000266
4500.0	864.6	11.7	.2	45.1	1054.6	658.4	332.4	2.3	1.000264
5000.0	849.1	14.1	-.4	36.9	1026.9	661.2	332.4	4.5	1.000256
5500.0	833.9	14.3	-.7	35.5	1007.9	661.4	332.4	6.7	1.000251
6000.0	819.0	14.5	-1.1	34.1	989.3	661.6	329.8	9.0	1.000246
6500.0	804.1	13.4	-1.8	34.8	975.0	660.3	323.8	11.4	1.000242
7000.0	789.5	12.3	-2.5	35.6	961.3	659.0	315.8	12.7	1.000238
7500.0	775.1	11.1	-3.2	36.4	947.8	657.6	304.1	13.2	1.000234
8000.0	761.1	9.9	-4.0	37.2	934.5	656.2	299.0	13.8	1.000230
8500.0	747.2	8.8	-4.7	38.1	921.4	654.8	297.2	14.2	1.000226
9000.0	733.7	7.6	-5.5	38.9	908.5	653.4	296.9	15.1	1.000222
9500.0	720.3	6.4	-6.3	39.7	895.8	652.0	297.0	16.2	1.000218
10000.0	707.2	5.3	-7.1	40.5	883.3	650.7	298.9	17.5	1.000214
10500.0	694.2	4.2	-8.2	39.7	870.3	649.4	300.9	18.8	1.000210
11000.0	681.3	3.4	-10.0	36.7	856.8	648.4	305.6	20.3	1.000205
11500.0	668.7	2.6	-11.8	33.6	843.5	647.4	309.8	21.6	1.000200
12000.0	656.2	1.9	-13.5	30.8	830.1	646.5	314.5	22.4	1.000196
12500.0	644.0	1.9	-14.0	29.5	814.6	646.5	317.2	22.4	1.000192
13000.0	631.9	1.9	-14.5	28.2	799.4	646.5	317.8	21.1	1.000188
13500.0	620.0	1.1	-15.2	28.3	786.8	645.5	318.3	19.5	1.000185
14000.0	608.3	.0	-16.0	28.7	775.0	644.2	318.9	17.7	1.000182
14500.0	596.9	-1.0	-16.7	29.0	763.3	643.0	320.4	16.6	1.000178
15000.0	585.6	-2.1	-17.5	29.4	751.8	641.7	322.7	16.0	1.000175
15500.0	574.5	-3.1	-18.3	29.8	740.5	640.5	324.8	15.9	1.000172
16000.0	563.6	-4.3	-19.0	30.4	729.5	639.1	326.2	16.4	1.000170
16500.0	552.7	-5.5	-19.8	31.3	718.8	637.6	326.7	17.2	1.000167
17000.0	542.0	-6.8	-20.6	32.1	708.3	636.1	325.6	18.6	1.000164
17500.0	531.5	-8.1	-21.4	33.0	697.9	634.6	324.2	20.1	1.000161
18000.0	521.3	-9.3	-22.3	33.9	687.8	633.0	321.7	21.6	1.000159
18500.0	511.2	-10.6	-23.1	34.8	677.8	631.5	320.0	22.8	1.000156
19000.0	501.2	-11.2	-24.4	32.4	666.0	630.8	320.6	22.8	1.000153
19500.0	491.3	-12.2	-25.3	32.6	655.6	629.5	321.5	22.7	1.000150
20000.0	481.6	-13.4	-26.1	33.4	645.5	628.0	323.2	22.0	1.000148
20500.0	472.0	-14.6	-26.9	34.1	635.7	626.6	324.8	21.6	1.000145
21000.0	462.7	-15.8	-27.7	34.8	625.9	625.2	325.8	21.9	1.000143
21500.0	453.5	-16.4	-28.7	33.3	614.9	624.4	325.9	22.2	1.000140
22000.0	444.4	-16.7	-29.8	31.0	603.4	624.0	325.2	22.5	1.000137
22500.0	435.5	-17.2	-30.9	29.1	592.5	623.4	324.1	23.0	1.000135
23000.0	426.7	-18.6	-31.9	29.8	583.6	621.7	322.9	23.5	1.000132

STATION ALTITUDE 3989.00 FEET MSL
13 NOV. 81 0512 HRS MST
ASCENSION NO. 696

UPPER AIR DATA
317002069
WHITE SANDS
TABLE 6 CON'T

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T_N)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	418.0	-20.0	-32.8	30.5	574.9	620.0	323.1	24.4	1.000130
24000.0	409.5	-21.3	-33.8	31.2	566.3	618.3	323.3	25.4	1.000128
24500.0	401.2	-22.7	-34.8	31.9	557.9	616.6	323.6	25.1	1.000126
25000.0	392.9	-24.1	-35.8	32.7	549.4	614.9	323.8	24.7	1.000124
25500.0	384.6	-25.6	-36.9	33.5	541.1	613.1	324.1	24.7	1.000122
26000.0	376.6	-27.0	-38.0	34.3	532.8	611.3	324.3	24.9	1.000120
26500.0	368.7	-28.5	-39.0	35.1	524.7	609.5	324.2	26.5	1.000118
27000.0	360.9	-29.9	-40.1	35.9	516.8	607.7	323.9	28.6	1.000116
27500.0	353.4	-31.3	-41.2	36.7	509.0	605.9	323.8	30.4	1.000114
28000.0	346.0	-32.8	-42.3	37.5	501.3	604.1	323.8	31.9	1.000113
28500.0	338.6	-34.2	-43.1	39.4	493.5	602.3	324.4	33.1	1.000111
29000.0	331.3	-35.4	-43.4	43.2	485.5	600.7	325.7	33.8	1.000109
29500.0	324.2	-36.7	-43.9	47.0	477.5	599.1	326.6	34.5	1.000107
30000.0	317.1	-38.0	-45.2	45.9**	469.7	597.5	326.8	35.1	1.000105
30500.0	310.2	-39.2	-50.8	27.6**	461.8	595.9	327.0	35.6	1.000103
31000.0	303.4	-40.4	-60.6	9.3**	454.1	594.4	326.6	35.8	1.000101
31500.0	296.7	-41.6			446.4	592.8	326.2	36.2	1.000099
32000.0	290.1	-42.8			438.8	591.3	325.9	37.7	1.000098
32500.0	283.6	-44.1			431.3	589.6	325.7	39.7	1.000096
33000.0	277.1	-45.4			423.9	588.0	325.6	43.7	1.000094
33500.0	270.9	-46.7			416.6	586.3	325.7	47.6	1.000093
34000.0	264.7	-48.0			409.5	584.6	326.7	51.2	1.000091
34500.0	258.7	-49.3			402.6	582.9	327.5	54.6	1.000090
35000.0	252.8	-50.6			395.7	581.2	327.3	53.6	1.000088
35500.0	247.0	-51.5			388.2	580.0	327.1	52.5	1.000086
36000.0	241.3	-52.0			380.2	579.3	326.2	48.9	1.000085
36500.0	235.7	-52.6			372.3	578.6	325.2	45.0	1.000083
37000.0	230.3	-53.2			364.6	577.8	321.0	41.1	1.000081
37500.0	224.9	-52.9			355.8	578.1	315.4	37.6	1.000079
38000.0	219.7	-52.0			346.1	579.3	308.0	38.6	1.000077
38500.0	214.6	-52.0			338.0	579.4	301.2	41.4	1.000075
39000.0	209.6	-52.4			330.8	578.8	297.1	44.6	1.000074
39500.0	204.7	-52.9			323.8	578.2	295.6	47.8	1.000072
40000.0	200.0	-53.3			316.9	577.6	294.4	50.8	1.000071
40500.0	195.3	-54.0			310.4	576.7	294.0	52.3	1.000069
41000.0	190.6	-54.7			304.0	575.8	293.6	53.9	1.000068
41500.0	186.1	-55.4			297.7	574.9	292.4	54.6	1.000066
42000.0	181.7	-56.1			291.6	574.0	291.1	55.1	1.000065
42500.0	177.4	-56.8			285.6	573.1	288.5	53.8	1.000064
43000.0	173.2	-57.5			279.8	572.1	284.6	51.4	1.000062

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
13 NOV. 81 0512 HRS MST
ASCENSION NO. 096

UPPER AIR DATA
317002069
WHITE SANDS
TABLE 6 CON'T

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	169.1	-58.2			274.0	571.2	281.2	49.6	1.000061
44000.0	165.1	-58.9			268.4	570.3	278.9	48.7	1.000060
44500.0	161.2	-59.5			262.9	569.4	277.2	47.8	1.000059
45000.0	157.4	-60.2			257.5	568.4	277.1	46.8	1.000057
45500.0	153.6	-60.3			251.5	568.4	276.9	46.5	1.000056
46000.0	149.9	-60.0			245.1	568.8	276.7	48.5	1.000055
46500.0	146.3	-61.0			240.2	567.4	276.5	50.4	1.000053
47000.0	142.7	-62.0			235.4	566.1	278.7	51.9	1.000052
47500.0	139.2	-63.0			230.7	564.8	280.9	53.5	1.000051
48000.0	135.8	-64.0			226.1	563.5	284.6	54.2	1.000050
48500.0	132.5	-65.0			221.7	562.1	290.0	54.3	1.000049
49000.0	129.2	-65.9			217.3	560.8	295.3	54.9	1.000048
49500.0	126.1	-66.9			213.0	559.4	296.0	47.1	1.000047
50000.0	123.0	-67.9			208.7	558.1	296.8	39.0	1.000046
50500.0	119.9	-68.7			204.4	557.0	295.6	32.4	1.000046
51000.0	116.9	-69.0			199.6	556.6	290.2	28.2	1.000044
51500.0	114.0	-69.4			194.9	556.1	282.9	24.4	1.000043
52000.0	111.1	-69.7			190.3	555.7	285.5	27.6	1.000042
52500.0	108.3	-70.0			185.8	555.2	288.1	31.2	1.000041
53000.0	105.6	-70.4			181.4	554.7			1.000040
53500.0	103.0	-70.7			177.2	554.3			1.000039
54000.0	100.4	-71.1			173.0	553.8			1.000039

STATION ALTITUDE 3989.00 FEET MSL
13 NOV. 81 0512 HRS MST
ASCENSION NO. 696

MANDATORY LEVELS
317002069
WHITE SANDS
TABLE 7

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4965.	14.1	-.4	37.	332.4	4.4
800.0	6643.	13.1	-2.0	35.	322.5	12.1
750.0	8410.	9.0	-4.6	38.	297.5	14.1
700.0	10270.	4.6	-7.5	41.	299.9	18.2
650.0	12240.	1.9	-13.7	30.	316.7	22.9
600.0	14352.	-.7	-16.5	29.	319.8	16.8
550.0	16611.	-5.8	-20.0	31.	326.4	17.5
500.0	19034.	-11.2	-24.6	32.	320.7	22.8
450.0	21657.	-16.5	-29.1	32.	325.6	22.3
400.0	24533.	-22.9	-35.0	32.	323.6	25.0
350.0	27687.	-32.0	-41.7	37.	323.8	31.1
300.0	31191.	-41.0			326.4	35.9
250.0	35169.	-51.2			327.2	53.1
200.0	39902.	-53.3			294.4	50.7
175.0	42699.	-57.2			286.3	52.4
150.0	45868.	-60.0			276.7	48.3
125.0	49539.	-67.3			296.2	44.5
100.0	53905.	-71.1				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
13 NOV. 81 0500 HRS MST
ASCENSION NO. 91

SIGNIFICANT LEVEL DATA
317060091
S M R

TABLE 8

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
883.4	3997.3	.0	-7.0	59.0
869.1	4436.7	12.2	1.8	49.0
863.3	4621.8	14.8	-.9	34.0
850.0	5053.0	15.2	-7.0	21.0
820.3	6041.5	15.4	-7.4	20.0
800.9	6705.7	14.3	-8.3	20.0
700.0	10373.3	4.7	-11.8	29.0
670.9	11506.3	2.9	-16.4	19.0
635.1	12965.4	3.2	-20.2	16.0
500.0	19171.9	-10.8	-33.0	14.0
458.5	21337.1	-16.9	-28.7	35.0
431.3	22842.0	-18.8	-36.1	20.0
400.0	24670.1	-24.0	-39.2	23.0
345.3	28137.0	-33.2	-43.9	33.0
319.3	29929.3	-38.2	-44.7	50.0
300.0	31332.4	-41.4		
293.7	31805.5	-42.6		
250.0	35315.7	-51.9		
229.9	37095.2	-54.3		
208.9	39122.7	-53.3		
200.0	40043.0	-55.0		
184.4	41748.3	-56.2		
150.0	45986.5	-64.9		
140.4	47317.7	-64.6		
136.2	47927.2	-66.1		
134.3	48209.4	-64.3		
125.0	49670.0	-60.6		
110.0	52316.2	-57.2		
100.0	54305.7	-57.1		

STATION ALTITUDE 3997.30 FEET MSL
13 NOV. 81 0500 HRS MST
ASCENSION NO. 91

UPPER AIR DATA
3170060091
S M R
TABLE 9

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3997.3	883.4	.0	-7.0	59.0	1124.9	644.4	.0	.0	1.000269
4000.0	883.3	.1	-7.0	58.9	1124.5	644.5	293.2	.0	1.000269
4500.0	867.1	13.1	1.1	43.9	1052.3	660.1	293.2	2.3	1.000265
5000.0	851.6	15.2	-6.0	22.6	1027.3	662.1	293.2	4.5	1.000247
5500.0	836.4	15.3	-7.2	20.5	1008.6	662.2	293.2	6.7	1.000241
6000.0	821.5	15.4	-7.4	20.0	990.3	662.3	288.6	8.7	1.000237
6500.0	806.9	14.6	-8.0	20.0	975.2	661.4	282.8	10.5	1.000233
7000.0	792.3	13.5	-8.5	20.7	961.3	660.1	281.3	10.8	1.000229
7500.0	777.9	12.2	-8.9	21.9	948.2	658.6	281.5	10.3	1.000226
8000.0	763.7	10.9	-9.3	23.2	935.2	657.1	281.6	10.2	1.000223
8500.0	749.8	9.6	-9.7	24.4	922.5	655.6	281.5	10.3	1.000219
9000.0	736.2	8.3	-10.2	25.6	909.9	654.0	277.4	11.0	1.000216
9500.0	722.8	7.0	-10.8	26.9	897.6	652.5	272.5	12.0	1.000213
10000.0	709.7	5.7	-11.3	28.1	885.4	651.0	273.5	15.0	1.000210
10500.0	696.7	4.5	-12.4	27.9	873.0	649.6	277.7	17.9	1.000206
11000.0	683.8	3.7	-15.2	23.5	859.5	648.6	288.8	20.6	1.000201
11500.0	671.1	2.9	-18.4	19.1	846.1	647.5	293.7	22.4	1.000196
12000.0	658.6	3.0	-19.0	18.0	830.1	647.6	296.2	23.4	1.000192
12500.0	646.3	3.1	-19.6	17.0	814.4	647.8	292.8	22.7	1.000188
13000.0	634.3	3.1	-20.2	16.0	799.2	647.8	291.7	21.6	1.000184
13500.0	622.1	2.0	-21.3	15.8	787.2	646.4	294.9	19.9	1.000181
14000.0	610.3	.9	-22.3	15.7	775.4	645.1	298.0	18.5	1.000178
14500.0	598.6	-.3	-23.3	15.5	763.8	643.7	301.1	17.2	1.000175
15000.0	587.2	-1.4	-24.4	15.3	752.3	642.4	303.1	17.0	1.000172
15500.0	576.0	-2.5	-25.4	15.2	741.1	641.1	304.8	17.0	1.000169
16000.0	565.0	-3.6	-26.4	15.0	730.0	639.7	305.7	18.0	1.000166
16500.0	554.2	-4.8	-27.5	14.9	719.1	638.4	305.7	19.0	1.000164
17000.0	543.6	-5.9	-28.5	14.7	708.4	637.0	301.3	20.2	1.000161
17500.0	533.3	-7.0	-29.5	14.5	697.8	635.6	297.9	21.3	1.000158
18000.0	523.1	-8.2	-30.6	14.4	687.4	634.3	295.7	21.9	1.000156
18500.0	513.1	-9.3	-31.6	14.2	677.2	632.9	294.9	21.9	1.000153
19000.0	503.3	-10.4	-32.6	14.1	667.2	631.6	295.8	21.1	1.000151
19500.0	493.5	-11.7	-31.7	17.2	657.4	630.0	296.1	20.2	1.000149
20000.0	483.7	-13.1	-30.3	22.0	647.8	628.3	295.6	19.3	1.000147
20500.0	474.1	-14.5	-29.4	26.9	638.4	626.6	295.6	18.8	1.000145
21000.0	464.7	-16.0	-28.9	31.7	629.2	624.9	296.1	18.5	1.000143
21500.0	455.5	-17.1	-29.4	33.4	619.4	623.5	296.5	20.5	1.000141
22000.0	446.3	-17.7	-31.6	28.4	608.5	622.7	296.9	23.3	1.000138
22500.0	437.3	-18.4	-34.1	23.4	597.8	621.9	299.1	24.7	1.000135
23000.0	428.5	-19.2	-36.3	20.3	587.8	620.8	301.1	25.3	1.000133

UPPER AIR DATA
317006009 1
S M R

STATION ALTITUDE 3997.30 FEET MSL
13 NOV. 81 0500 HRS MST
ASCENSION NO. 91

TABLE 9 CON'T

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	419.8	-20.7	-37.1	21.1	579.1	619.1	303.1	24.3	1.000130
24000.0	411.2	-22.1	-38.0	21.9	570.5	617.3	303.3	23.4	1.000128
24500.0	402.8	-23.5	-38.9	22.7	562.0	615.6	301.6	22.7	1.000126
25000.0	394.4	-24.9	-39.5	24.0	553.4	613.9	299.4	23.0	1.000124
25500.0	386.2	-26.2	-40.1	25.4	544.7	612.3	297.1	23.7	1.000122
26000.0	378.1	-27.5	-40.8	26.8	536.1	610.6	296.5	25.1	1.000120
26500.0	370.1	-28.9	-41.4	28.3	527.7	609.0	296.2	26.4	1.000119
27000.0	362.4	-30.2	-42.2	29.7	519.5	607.3	297.3	27.5	1.000117
27500.0	354.8	-31.5	-42.9	31.2	511.4	605.6	298.6	28.6	1.000115
28000.0	347.3	-32.8	-43.7	32.6	503.4	604.0	300.5	29.7	1.000113
28500.0	339.9	-34.2	-43.9	36.4	495.5	602.2	302.2	31.2	1.000111
29000.0	332.5	-35.6	-44.0	41.2	487.6	600.5	303.6	33.1	1.000109
29500.0	325.3	-37.0	-44.3	45.9	479.9	598.7	304.3	35.3	1.000108
30000.0	318.3	-38.4	-45.3	47.5**	472.2	597.0	304.7	37.7	1.000106
30500.0	311.3	-39.5	-50.5	29.7**	464.1	595.5	304.3	38.6	1.000104
31000.0	304.5	-40.6	-58.9	11.8**	456.2	594.0	303.8	39.4	1.000102
31500.0	297.8	-41.8			448.4	592.5	303.3	40.0	1.000100
32000.0	291.1	-43.1			440.8	590.9	302.8	40.7	1.000098
32500.0	284.5	-44.4			433.3	589.2	303.4	42.0	1.000097
33000.0	278.0	-45.8			426.0	587.5	304.0	43.3	1.000095
33500.0	271.7	-47.1			418.7	585.7	304.1	44.9	1.000093
34000.0	265.6	-48.4			411.6	584.0	304.4	46.7	1.000092
34500.0	259.5	-49.7			404.7	582.3	305.4	48.9	1.000090
35000.0	253.6	-51.1			397.9	580.6	306.1	50.8	1.000089
35500.0	247.8	-52.1			390.7	579.2	306.0	51.2	1.000087
36000.0	242.1	-52.8			382.7	578.3	305.8	51.1	1.000085
36500.0	236.4	-53.5			375.0	577.4	304.6	45.0	1.000084
37000.0	230.9	-54.2			367.4	576.5	303.0	39.0	1.000082
37500.0	225.5	-54.1			358.7	576.6	298.0	36.0	1.000080
38000.0	220.3	-53.9			349.9	576.9	292.0	33.8	1.000078
38500.0	215.1	-53.6			341.4	577.2	284.1	38.3	1.000076
39000.0	210.1	-53.4			333.0	577.6	276.7	44.3	1.000074
39500.0	205.2	-54.0			326.2	576.7	265.4	57.3	1.000073
40000.0	200.4	-54.9			319.9	575.5	260.1	67.8	1.000071
40500.0	195.7	-55.3			313.0	575.0	261.2	66.1	1.000070
41000.0	191.1	-55.7			306.1	574.5	263.7	60.6	1.000068
41500.0	186.6	-56.0			299.4	574.1	270.1	48.7	1.000067
42000.0	182.2	-56.7			293.2	573.1	271.9	43.8	1.000065
42500.0	177.8	-57.7			287.5	571.8	267.2	45.3	1.000064
43000.0	173.5	-58.8			281.9	570.4	263.5	45.8	1.000063

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
13 NOV. 81 0500 HRS MST
ASCENSION NO. 91

UPPER AIR DATA
3170060091
S M R

TABLE 9 CON'T

GEODETIC COORDINATES
32.4H034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGRLES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	169.3	-59.8			276.5	569.0	260.8	44.3	1.000062
44000.0	165.2	-60.8			271.1	567.7	258.5	42.3	1.000060
44500.0	161.3	-61.8			265.9	566.3	257.3	39.1	1.000059
45000.0	157.4	-62.9			260.7	564.9	254.1	34.8	1.000058
45500.0	153.6	-63.9			255.7	563.5	244.5	28.6	1.000057
46000.0	149.9	-64.9			250.7	562.2	237.0	22.8	1.000056
46500.0	146.2	-64.8			244.5	562.4	232.3	16.7	1.000054
47000.0	142.6	-64.7			238.3	562.5	210.5	12.8	1.000053
47500.0	139.1	-65.0			232.9	562.0	177.5	12.3	1.000052
48000.0	135.7	-65.6			227.8	561.2	136.8	10.9	1.000051
48500.0	132.4	-63.6			220.1	564.0	104.1	9.4	1.000049
49000.0	129.2	-62.3			213.4	565.7	56.2	7.6	1.000048
49500.0	126.0	-61.0			207.0	567.4	100.4	5.3	1.000046
50000.0	123.0	-60.2			201.2	568.5	126.8	5.3	1.000045
50500.0	120.1	-59.5			195.8	569.4	121.7	3.9	1.000044
51000.0	117.2	-58.9			190.6	570.2	117.8	3.9	1.000042
51500.0	114.4	-58.2			185.5	571.1	199.6	.7	1.000041
52000.0	111.7	-57.6			180.5	572.0	280.4	6.9	1.000040
52500.0	109.0	-57.2			175.9	572.5	276.1	6.9	1.000039
53000.0	106.5	-57.2			171.7	572.5	221.7	2.0	1.000038
53500.0	103.9	-57.1			167.6	572.6			1.000037
54000.0	101.5	-57.1			163.6	572.6			1.000036

STATION ALTITUDE 3997.30 FEET MSL
13 NOV. 81 0500 HRS MST
ASCENSION NO. 91

MANDATORY LEVELS
3170060091
S M R
TABLE 10

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5049.	15.2	-7.0	21.	293.2	4.7
800.0	6731.	14.2	-8.3	20.	281.2	11.1
750.0	8502.	9.6	-9.7	24.	281.5	10.3
700.0	10363.	4.7	-11.8	29.	274.3	17.3
650.0	12335.	3.1	-19.4	17.	293.9	22.9
600.0	14453.	-.1	-23.2	16.	300.9	17.3
550.0	16716.	-5.2	-27.9	15.	303.6	19.5
500.0	19145.	-10.8	-33.0	14.	296.1	20.8
450.0	21765.	-17.5	-30.7	30.	296.7	22.1
400.0	24629.	-24.0	-39.2	23.	301.0	22.5
350.0	27773.	-32.4	-43.4	32.	299.8	29.3
300.0	31270.	-41.4			303.5	39.8
250.0	35239.	-51.9			306.0	51.0
200.0	39947.	-55.0			260.2	67.7
175.0	42730.	-58.4			264.4	46.3
150.0	45863.	-64.9			237.2	23.3
125.0	49528.	-60.6			116.7	5.5
100.0	54138.	-57.1				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

END
DATE
FILME
02-8
DTIC